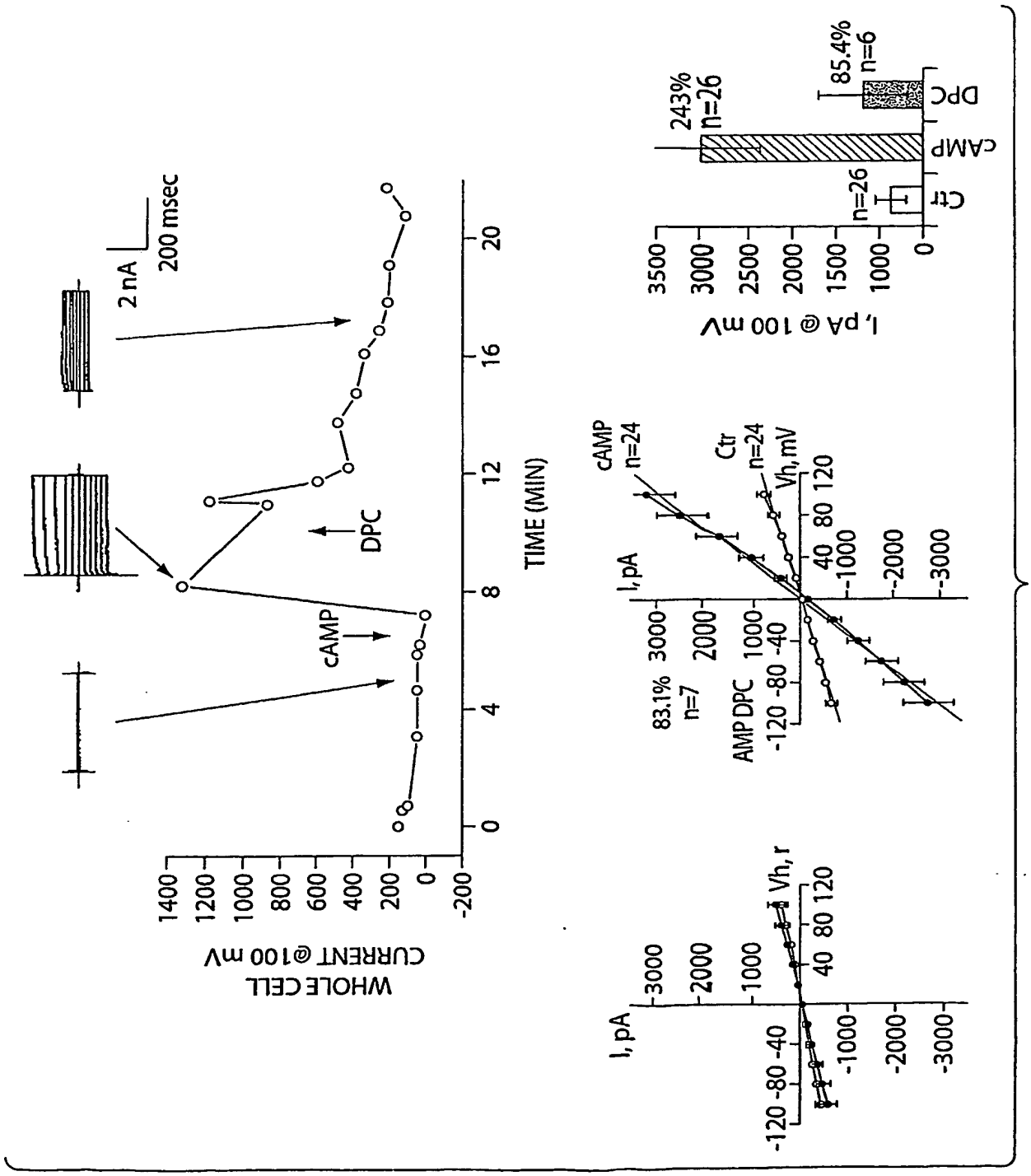

WHOLE CELL
CURRENT @100 mV
1400
1200
1000
800
600
400
200
0
-200
0
4
8
12
16
20
TIME (MIN)
cAMP
DPC
2 nA
200 msec
I, pA
3000
2000
1000
-1000
-2000
-3000
-120 -80 -40
40 80 120
Vh, r
83.1%
n=7
AMP DPC
cAMP
n=24
Ctr
n=24
Vh, mV
I, pA @ 100 mV
3500
3000
2500
2000
1500
1000
0
n=26
Ctr
243%
n=26
cAMP
85.4%
n=6
DPC

Fig. 1

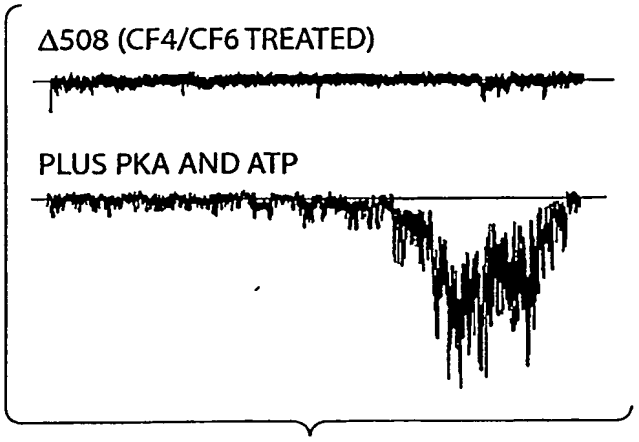

Δ508 (CF4/CF6 TREATED)
PLUS PKA AND ATP

Fig. 2A

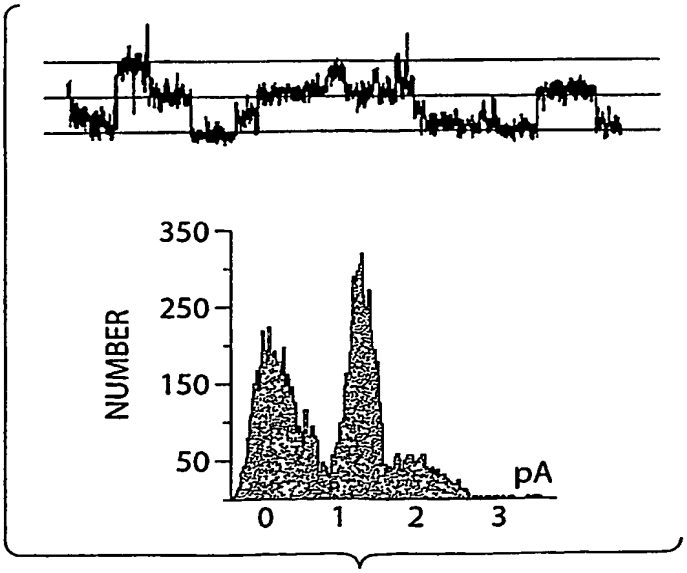

350
250
150
50
NUMBER
pA
0
1
2
3

Fig. 2B

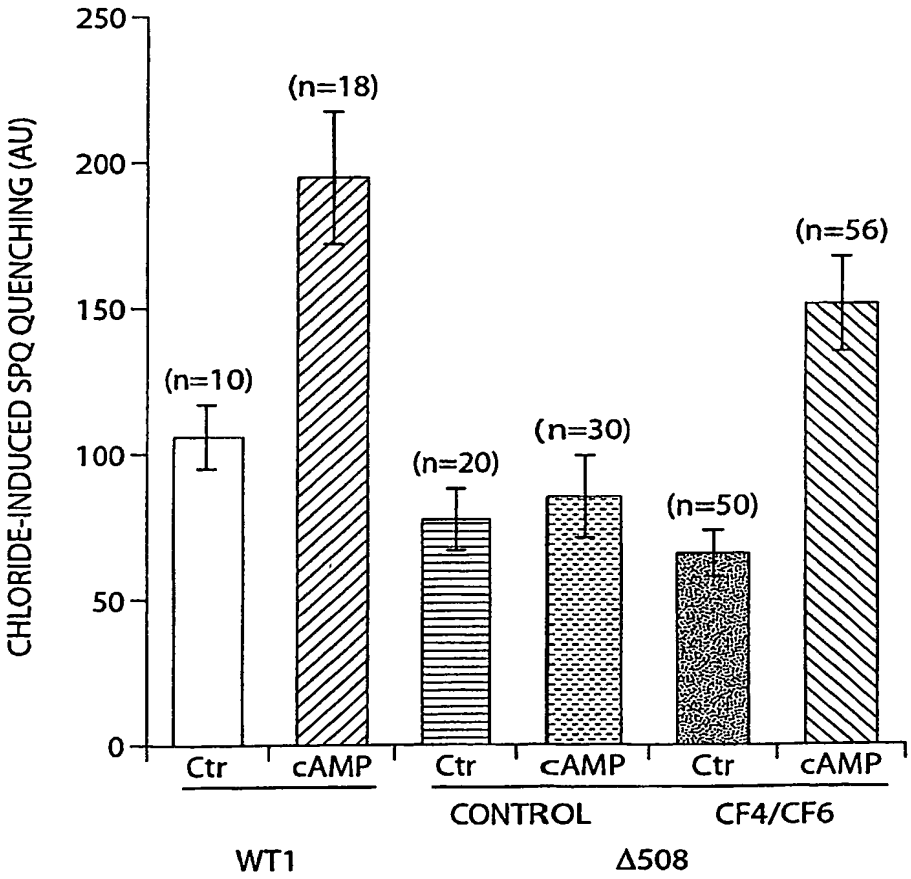

CHLORIDE-INDUCED SPQ QUENCHING (AU)
250
200
150
100
50
0
(n=10)
(n=18)
(n=20)
(n=30)
(n=50)
(n=56)
Ctr
cAMP
Ctr
cAMP
Ctr
cAMP
CONTROL
CF4/CF6
WT1
Δ508

Fig. 3

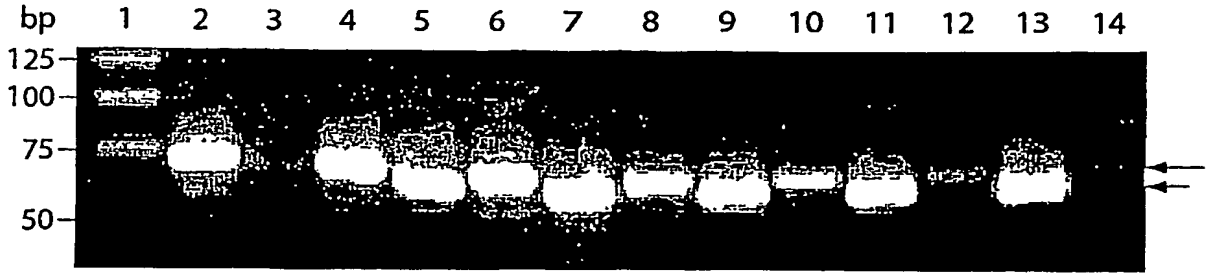


Fig. 4

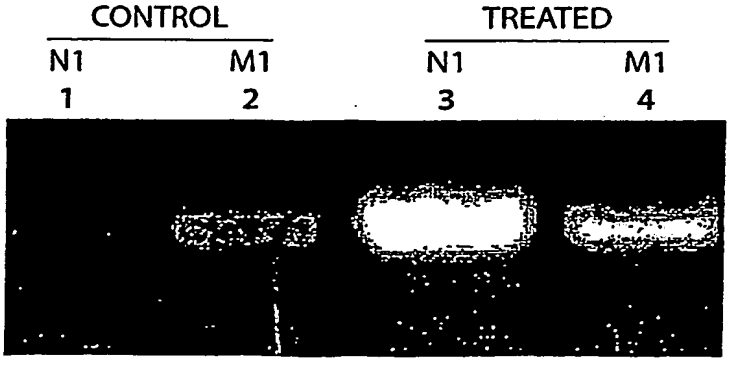


Fig. 5

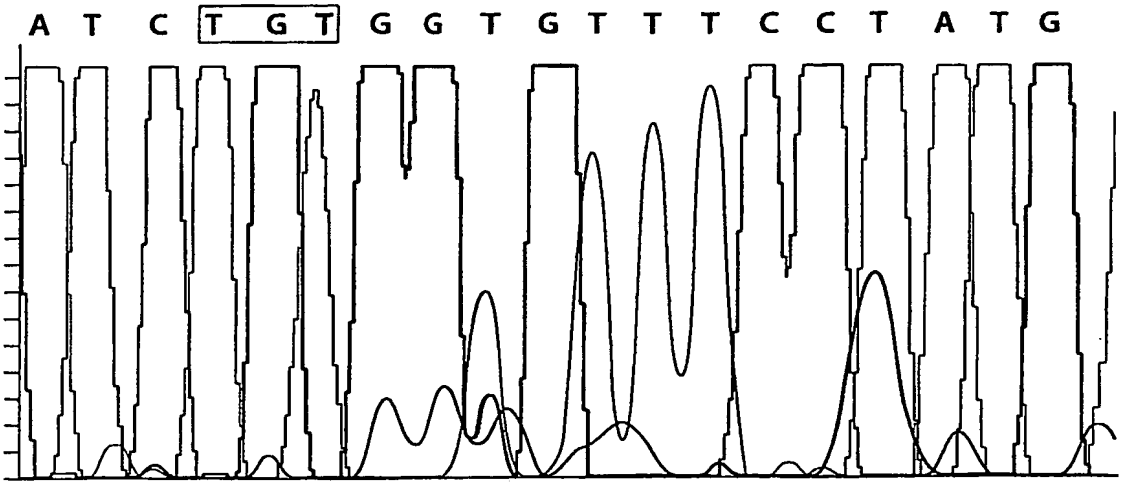


Fig. 6

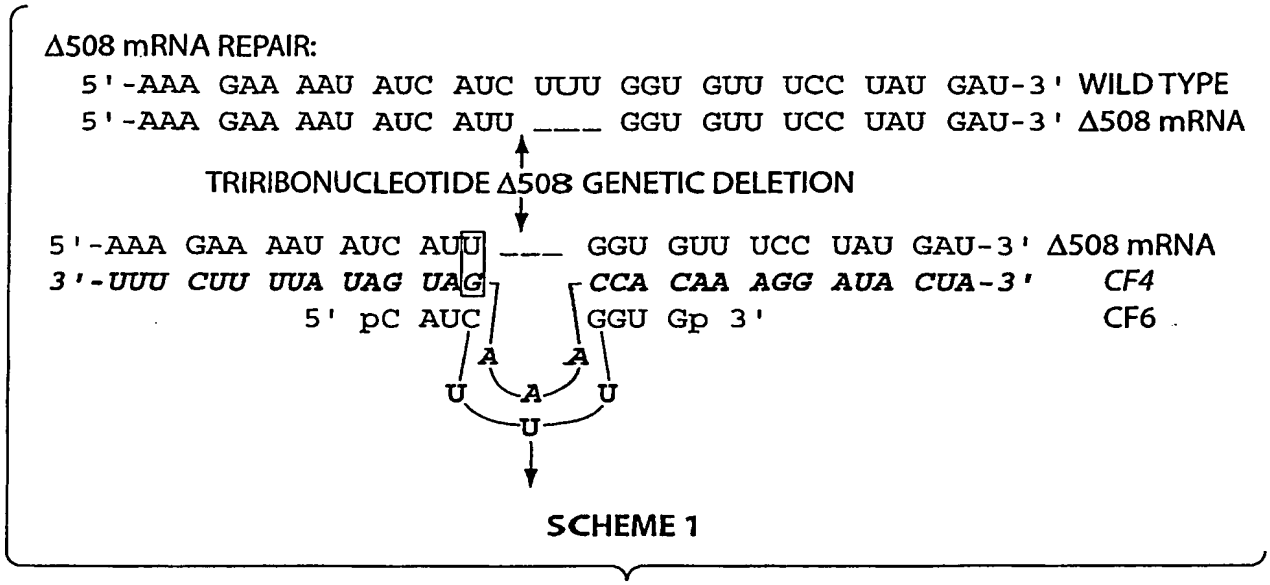

Δ508 mRNA REPAIR:
5'-AAA GAA AAU AUC AUC UUU GGU GUU UCC UAU GAU-3' WILD TYPE
5'-AAA GAA AAU AUC AUU ___ GGU GUU UCC UAU GAU-3' Δ508 mRNA
TRIRIBONUCLEOTIDE Δ508 GENETIC DELETION
5'-AAA GAA AAU AUC AUU ___ GGU GUU UCC UAU GAU-3' Δ508 mRNA
3'-UUU CUU UUA UAG UAG CCA CAA AGG AUA CUA-3' CF4
5' pC AUC GGU Gp 3' CF6
A
A
U
A
U
U
SCHEME 1

Fig. 7A

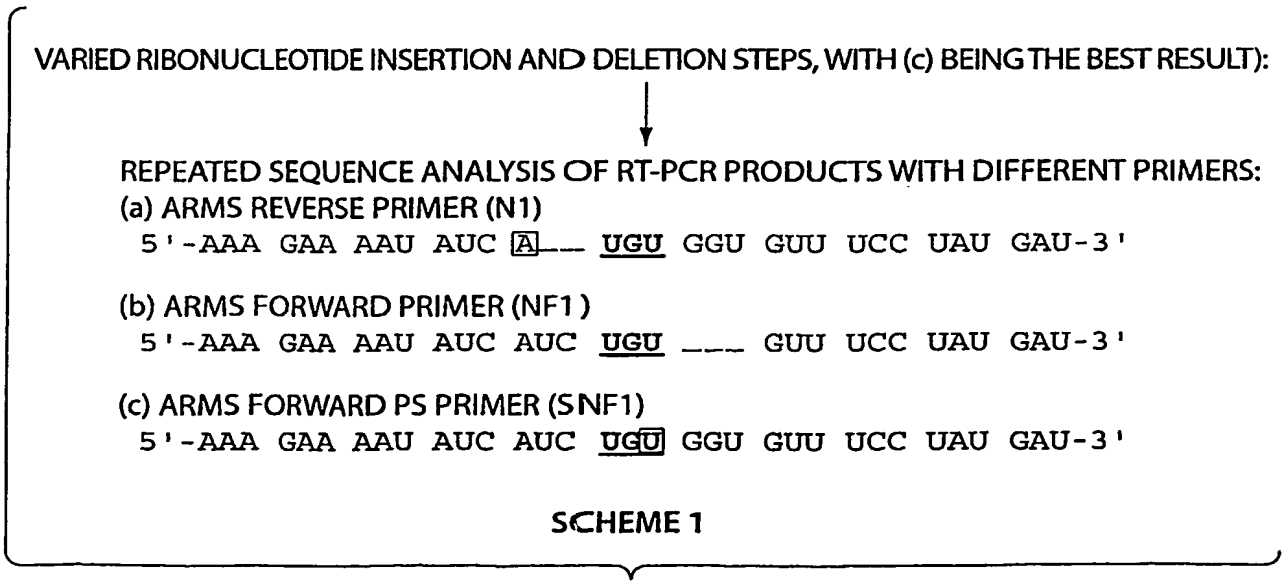
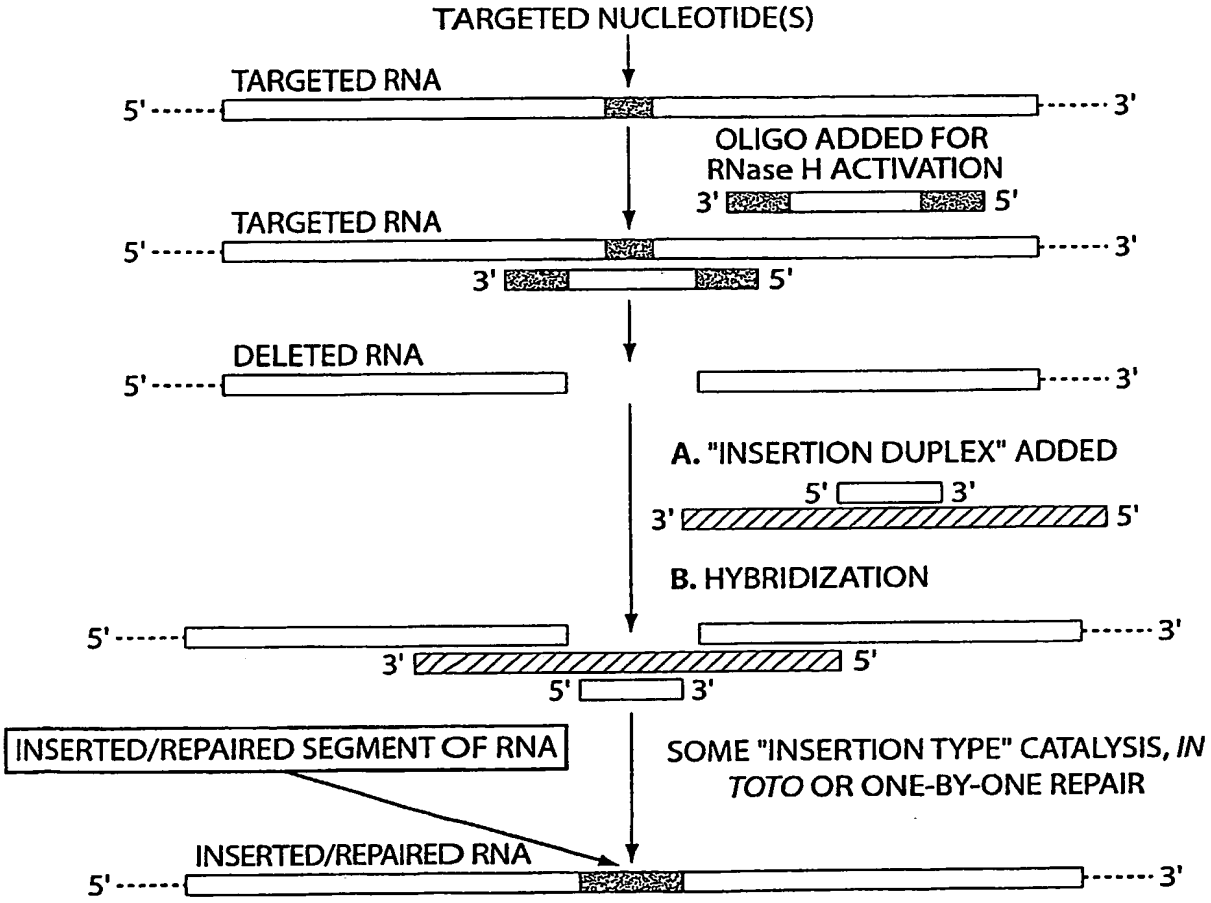
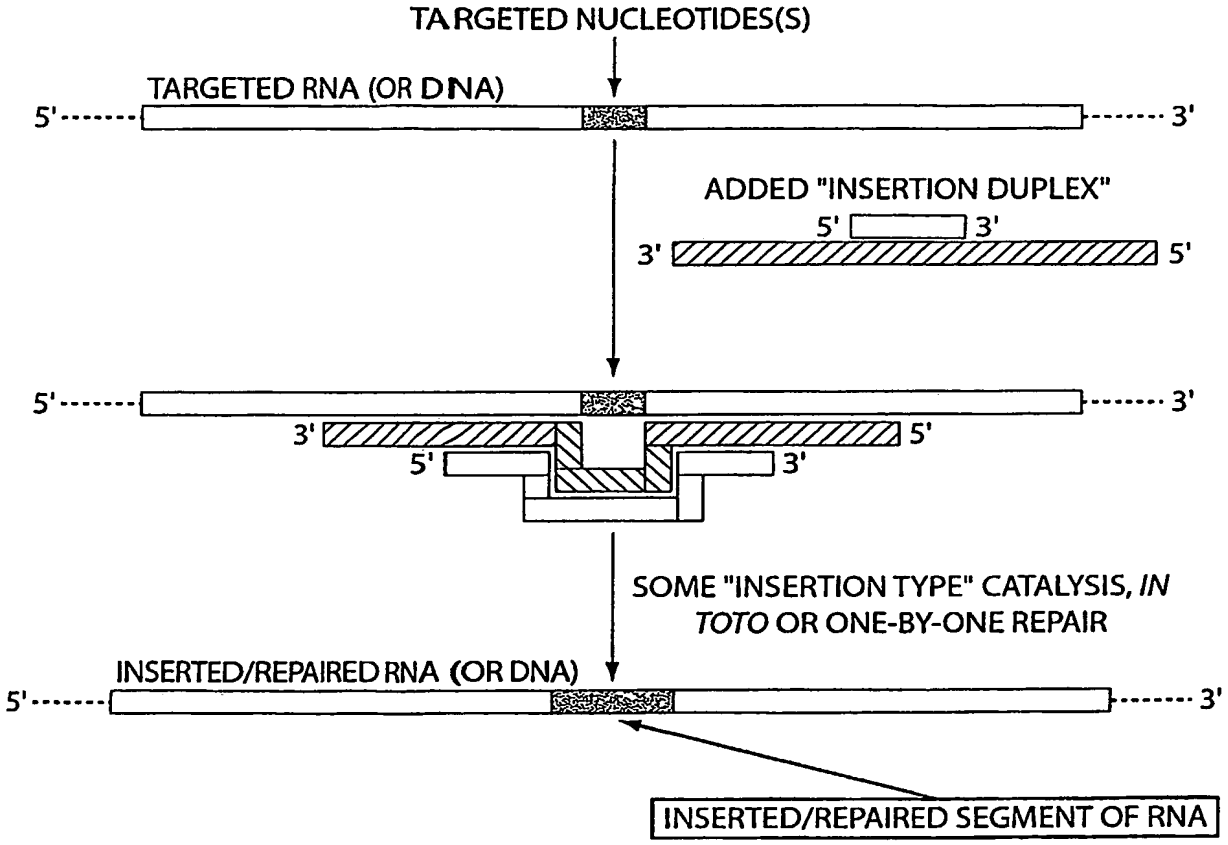

VARIED RIBONUCLEOTIDE INSERTION AND DELETION STEPS, WITH (c) BEING THE BEST RESULT):
REPEATED SEQUENCE ANALYSIS OF RT-PCR PRODUCTS WITH DIFFERENT PRIMERS:
(a) ARMS REVERSE PRIMER (N1)
5'-AAA GAA AAU AUC A___ UGU GGU GUU UCC UAU GAU-3'
(b) ARMS FORWARD PRIMER (NF1)
5'-AAA GAA AAU AUC AUC UGU ___ GUU UCC UAU GAU-3'
(c) ARMS FORWARD PS PRIMER (SNF1)
5'-AAA GAA AAU AUC AUC UGU GGU GUU UCC UAU GAU-3'
SCHEME 1

Fig. 7B



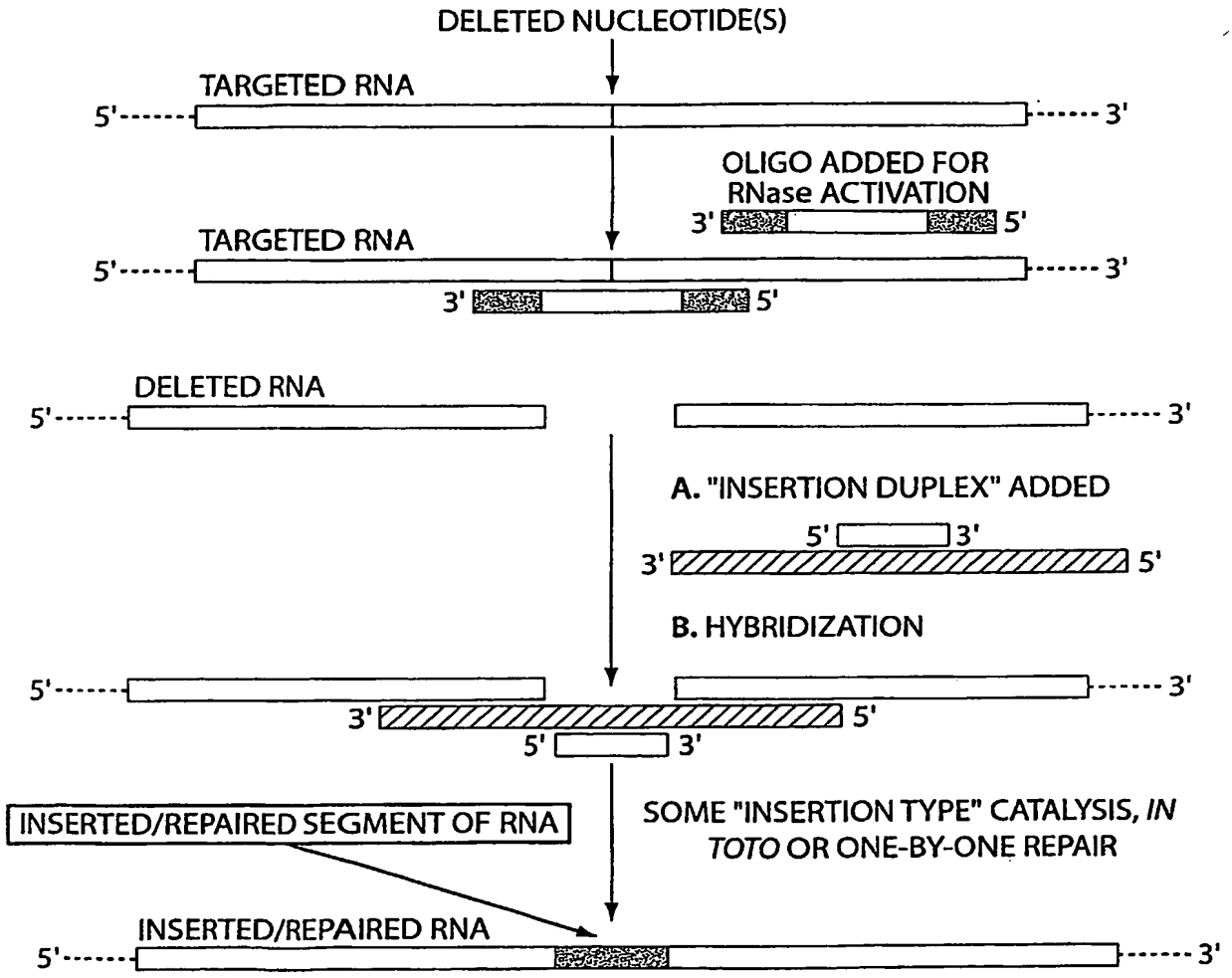
SCHEME 2

Fig. 8



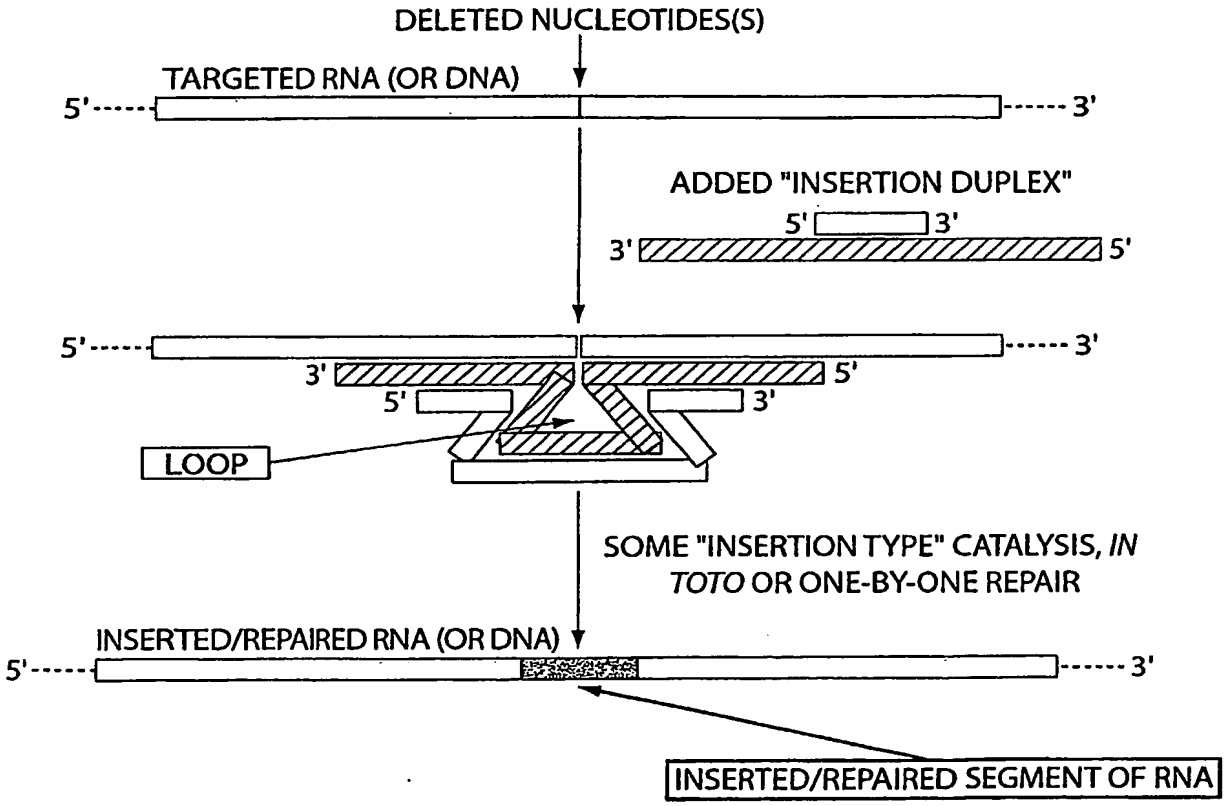
SCHEME 3

Fig. 9



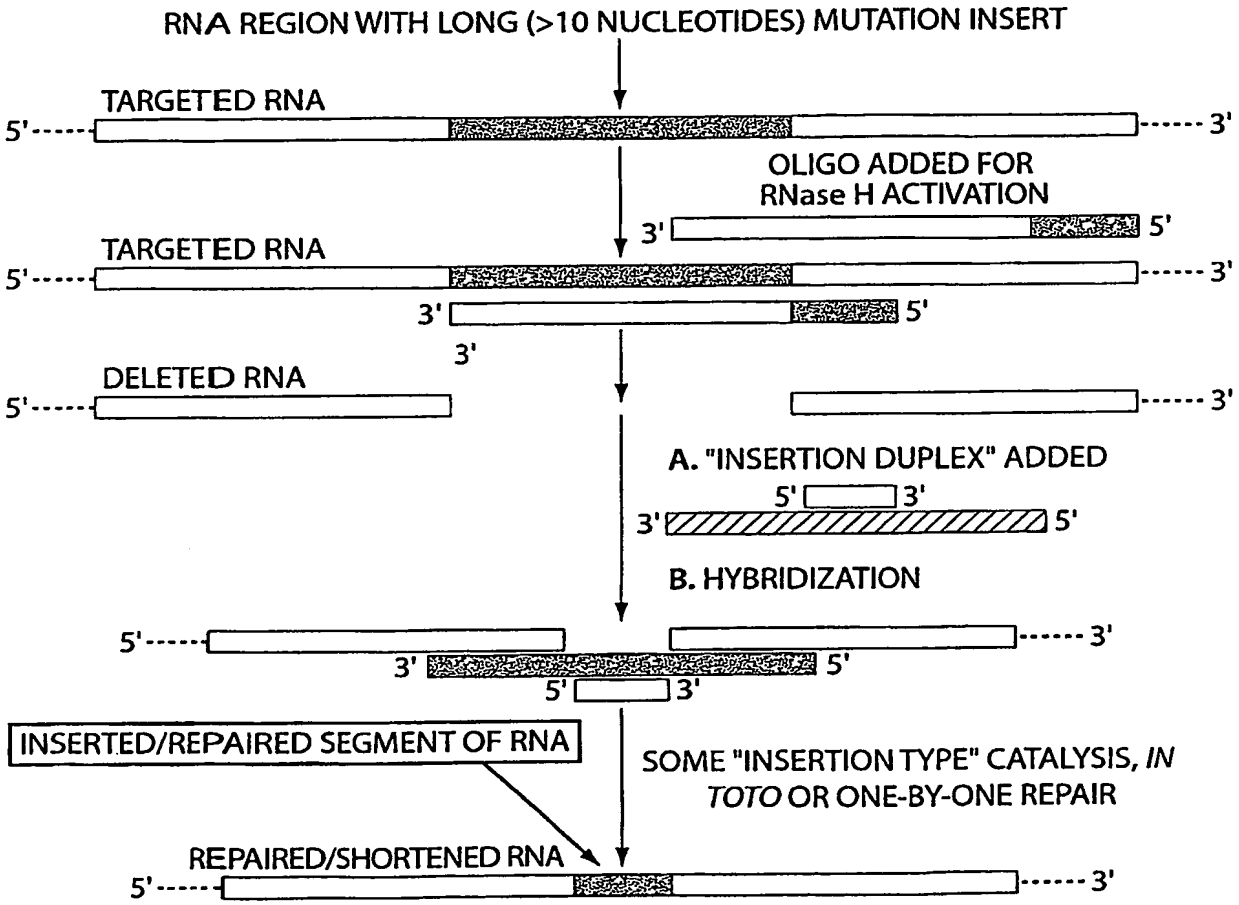
SCHEME 4

Fig. 10



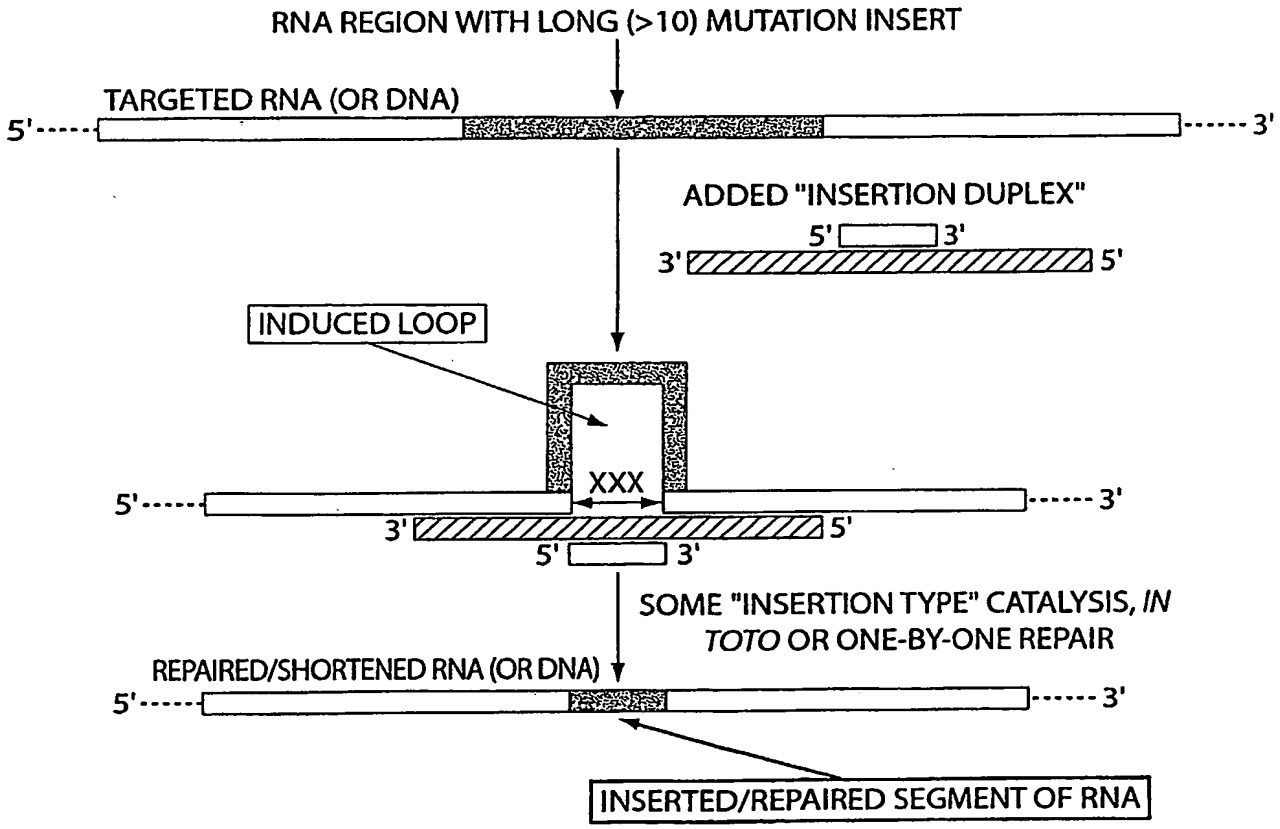
SCHEME 5

Fig. 11



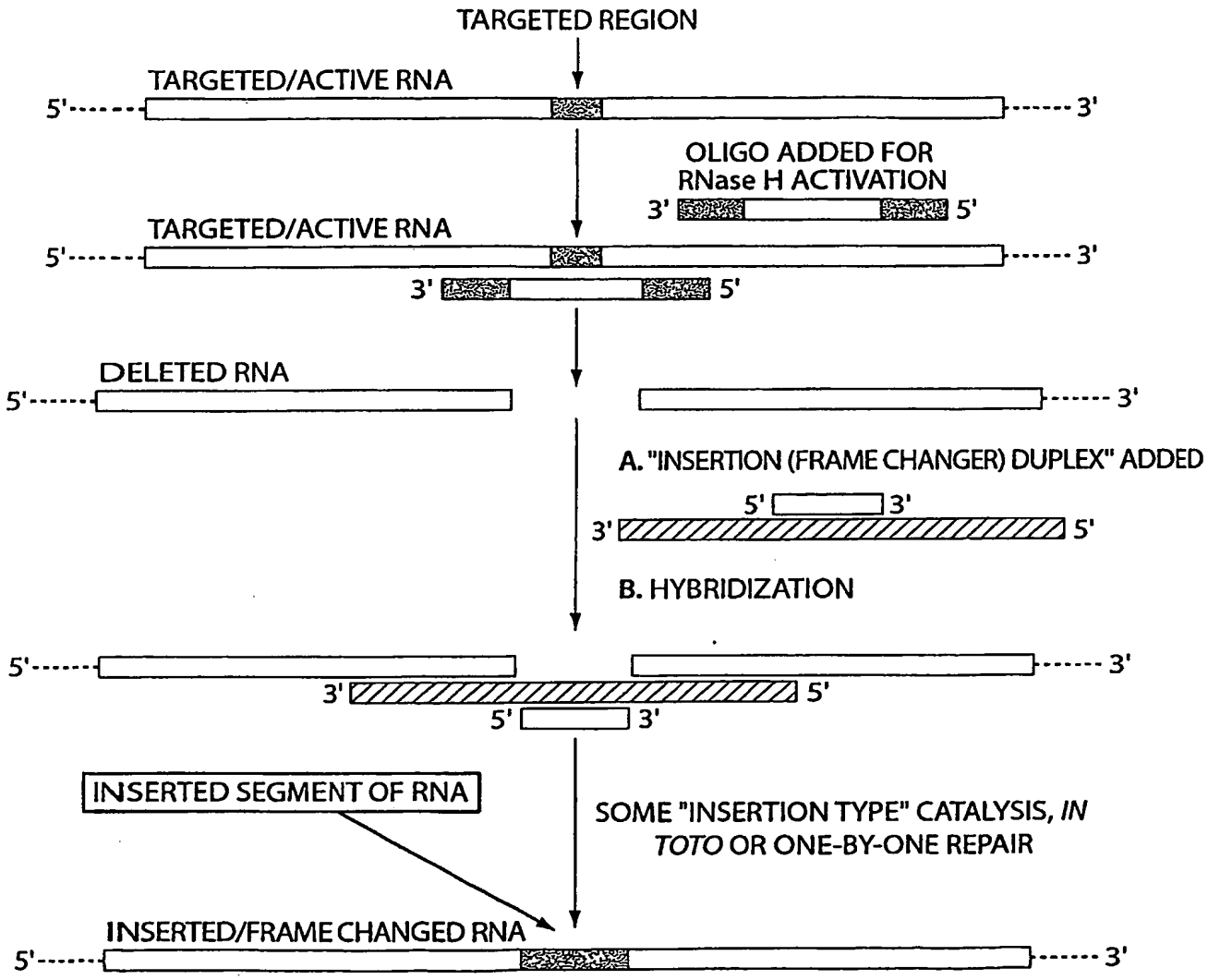
SCHEME 6

Fig. 12



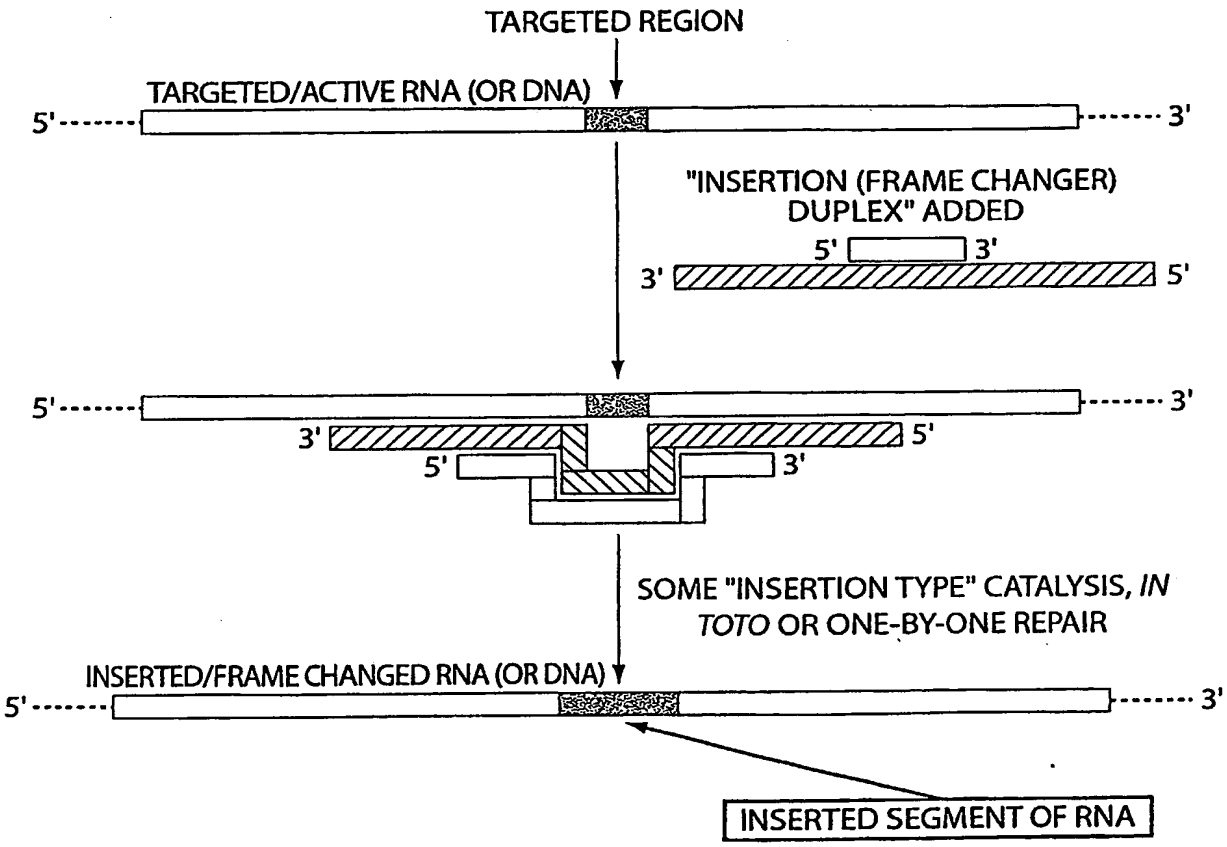
SCHEME 7

Fig. 13



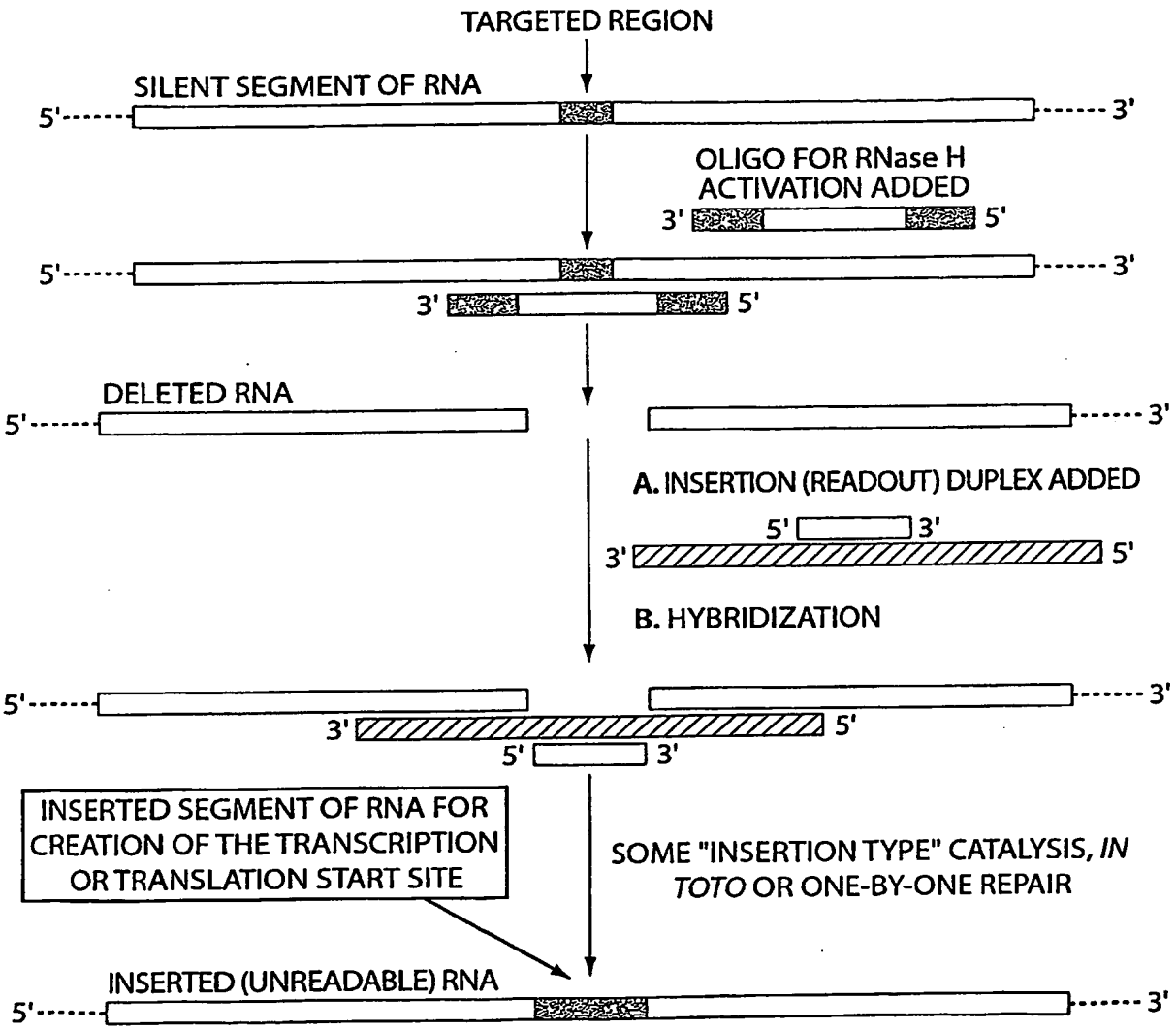
SCHEME 8

Fig. 14



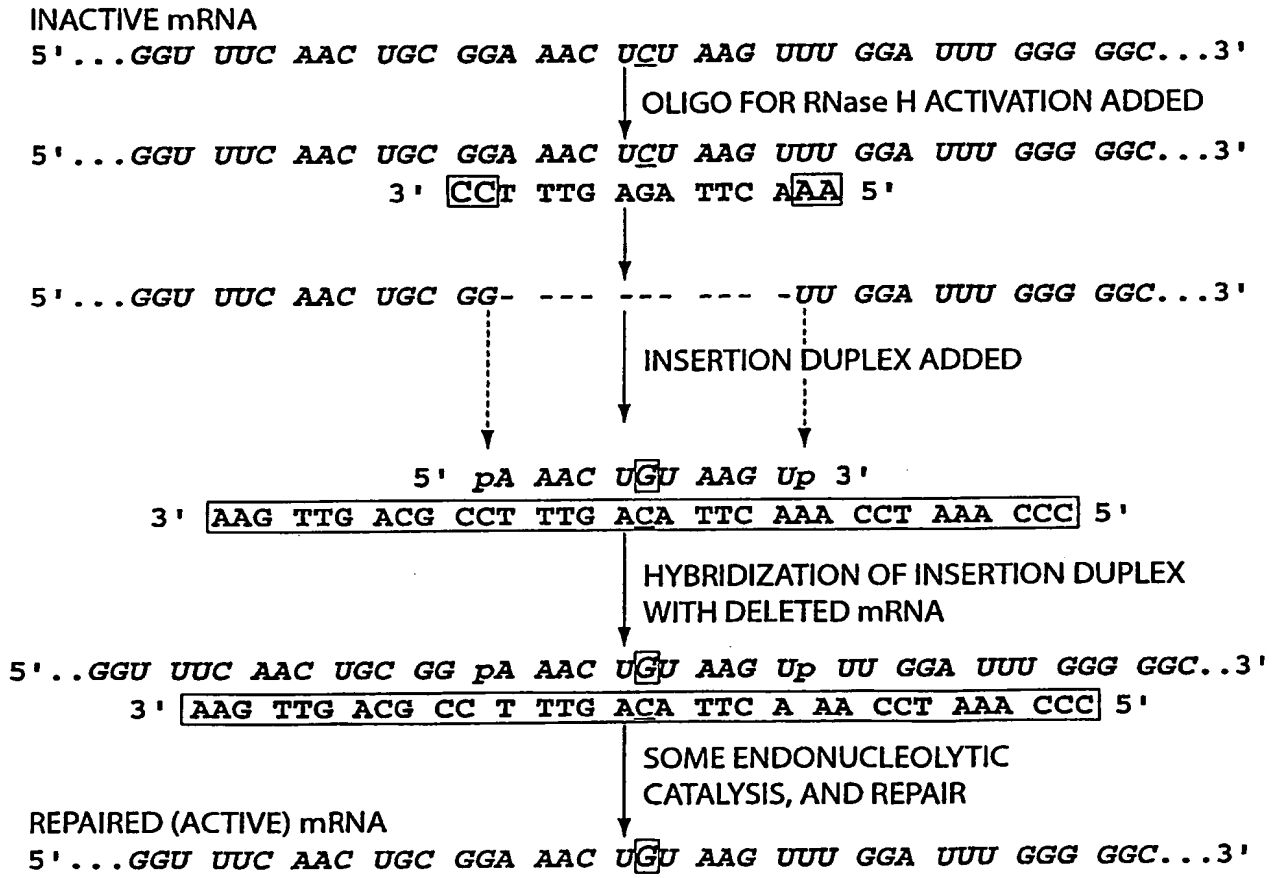
SCHEME 9

Fig. 15



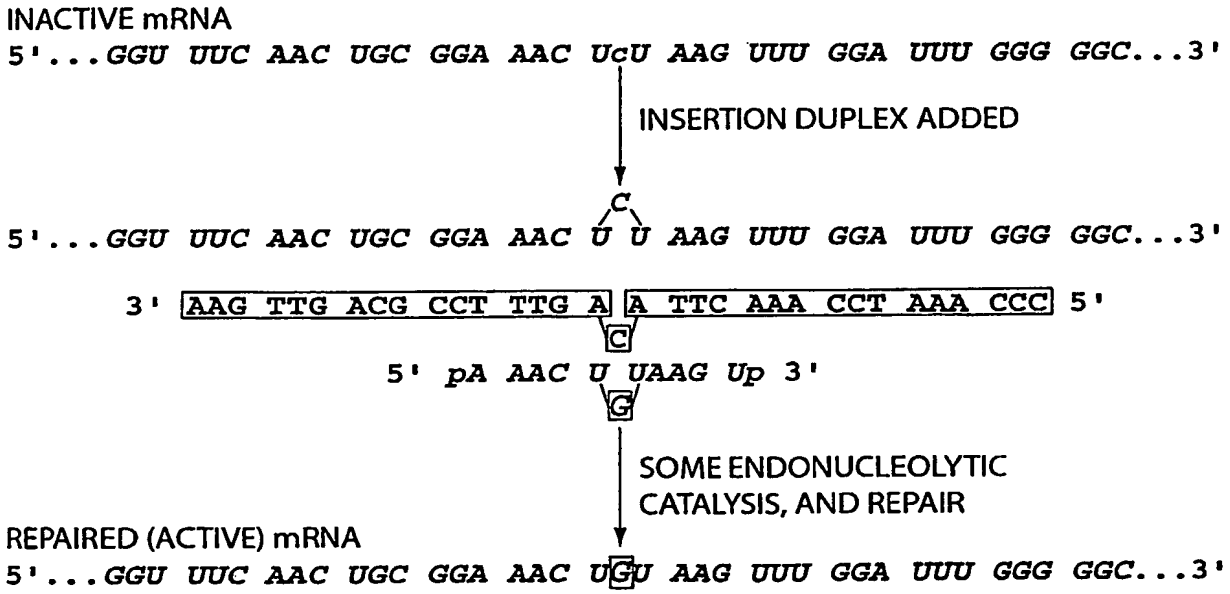
SCHEME 10

Fig. 16



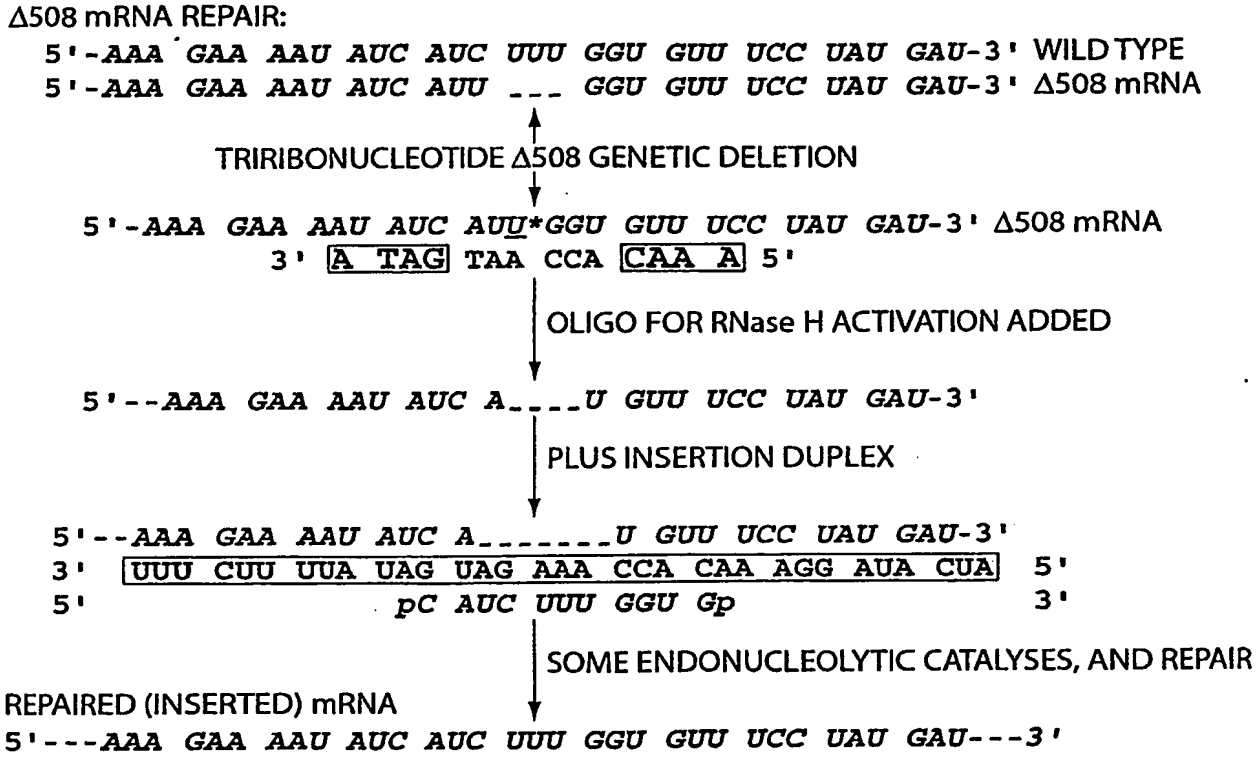
SCHEME 11

Fig. 17



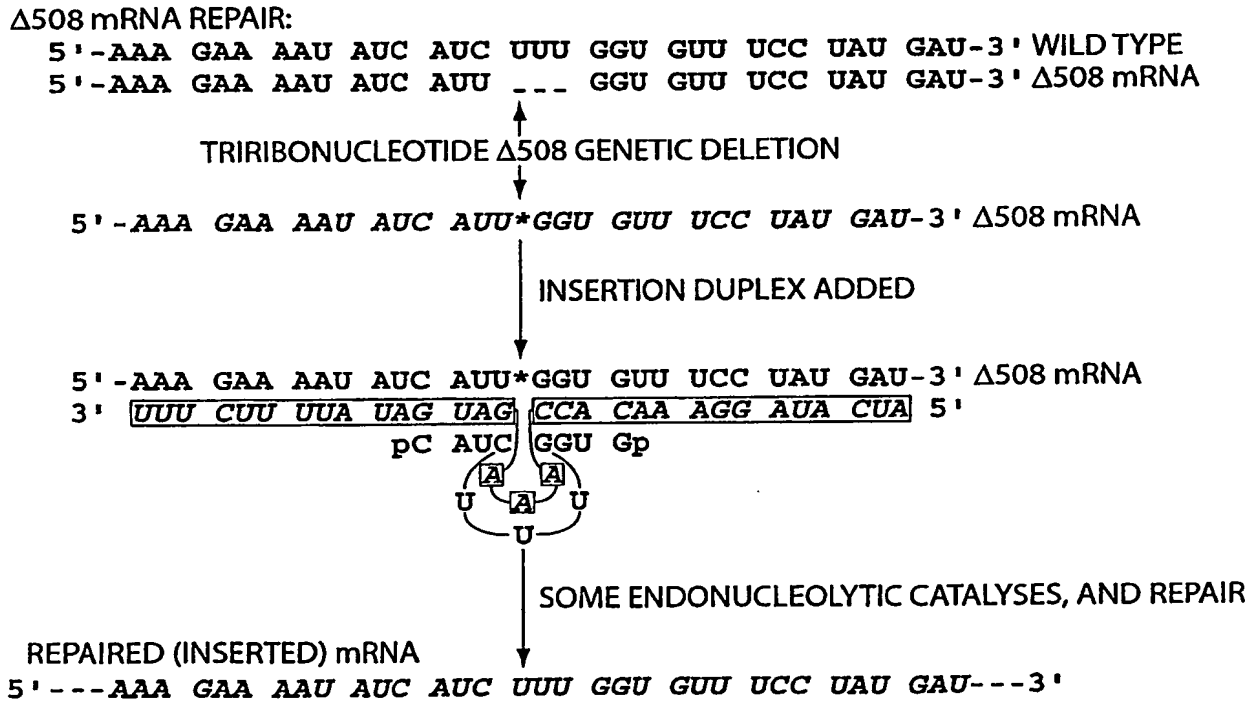
SCHEME 12

Fig. 18



SCHEME 13

Fig. 19



SCHEME 14

Fig. 20

SEQUENCE OF mRNA FROM -12 POSITION

-12 +1 mRNA +30

5' CGG GAG ACC GCC AUG GCG ACC CUG GAA AAG CUG AUG AAG GCC 3'
3' GCC CTC TGG CGG TAC CGC TGG GAC CTT TTC GAC TAC TTC CGG 5'
ANTISENSE

MECHANISM OF DELETION/INSERTION:

STEP 1 - ADDITION OF RNase H ACTIVATING OLIGONUCLEOTIDE (OLIGONUCLEOTIDE IDENTITY (ID) IS HT3)

mRNA
5' CGG GAG ACC GCC AUG GCG ACC CUG GAA AAG CUG AUG AAG GCC 3'
3' CGC TGG GTC CTT TTC GAC (HT3) 5'

STEP 2 - ADDITION OF INSERTION DUPLEX (DUPLEX ID:HT4/HT6)

CUT mRNA
5'...CGG GAG ACC GCC AUG GCG CUG AUG AAG GCC...3'
3' (HT4) TGG CGG TAC CGC TGG ATT TT -xGAC TAC TTC CGG 5'
5' (HT6) pACC UAA AAp 3'

INSERTED mRNA
5'...CGG GAG ACC GCC AUG GCG ACC UAA AA CUG AUG AAG GCC...3'

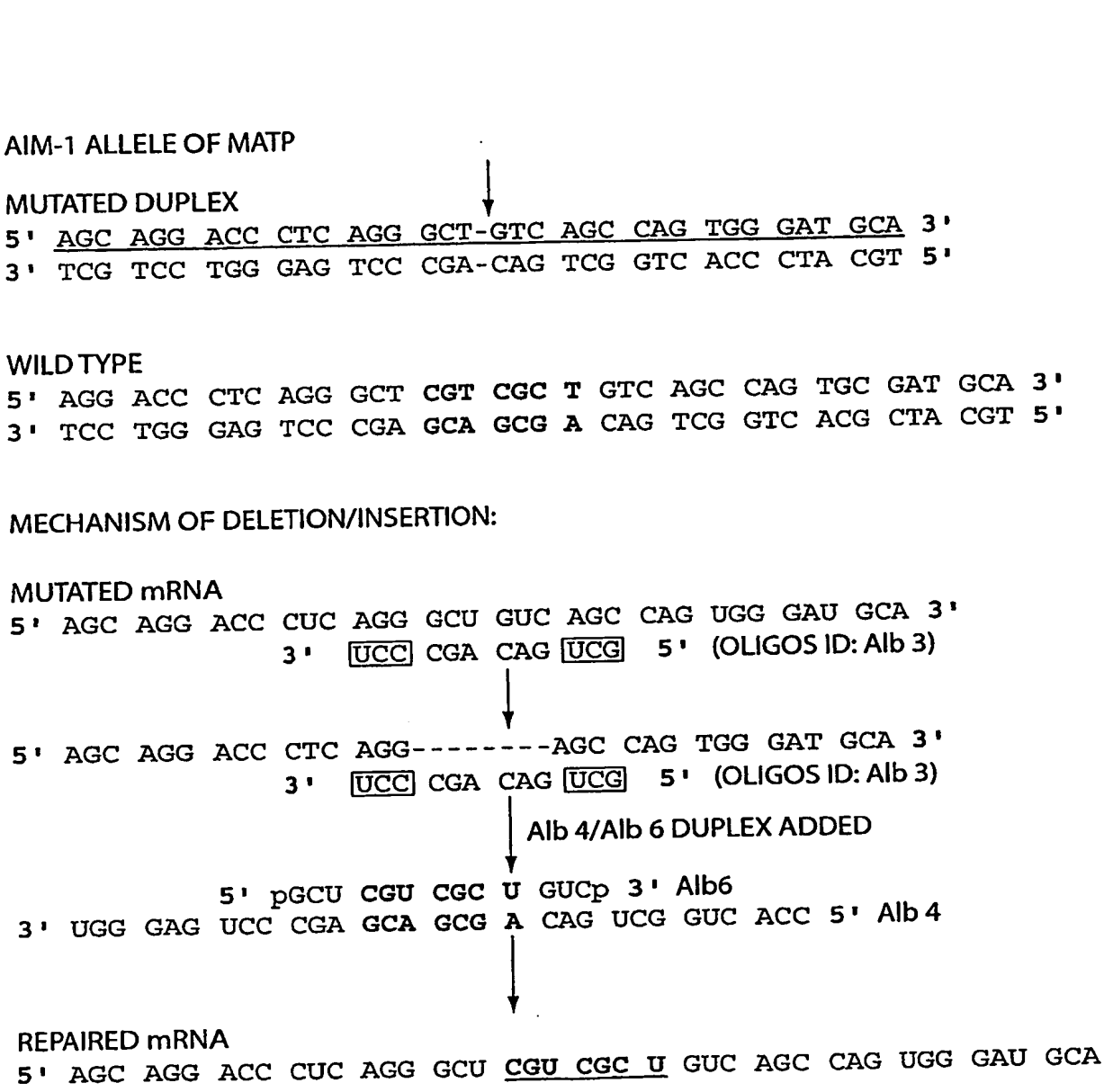
WILD TYPE mRNA (5'>3')
CGG GAG ACC GCC AUG GCG ACC CUG GAA AAG CUG AUG AAG GCC

MODIFIED mRNA
CGG GAG ACC GCC AUG GCG ACC ___ UAA ___ AAx CUG AUG AAG GCC

DELETED BASE

SCHEME 15

Fig. 21



SCHEME 16

Fig. 22